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WM. A. TAYLOR, Chief, and the Office of Markets and
Rural Organization, CHARLES J. BRAND, Chief

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TABLE FOR CONVERTING WEIGHTS OF MECHANICAL SEPARATIONS INTO PERCENTAGES OF THE SAMPLE ANALYZED.[1]

By E. G. Boerner, *Assistant in Grain Standardization.*

INTRODUCTION.

The rules and regulations for the enforcement of the United States Grain Standards Act prescribe a definite procedure for securing a representative sample upon which the grade of any particular lot or parcel of shelled corn is to be based.

The rules provide that the original sample must be not less than 2 quarts in quantity, of which approximately 1⅛ pints must be placed in an air-tight container and the remainder inclosed in a cloth sack. The portion in the container is intended for the determination of the percentage of moisture, and this portion should be used for that test only. The remainder of the sample, contained in a cloth bag, will approximate 2½ pints, and this portion is to be used for the remaining determinations, including color, damaged corn (not including heat damage), heat-damaged corn, and foreign material and cracked corn. The grades specify the maximum and minimum percentages permitted for the factors mentioned, and these percentages are to be determined by weight.

Because of the time involved, it is impracticable to make the mechanical separations for color, damage, and foreign material and cracked corn on the entire 2½ or more pints, and it therefore becomes necessary, in most cases at least, to divide the sample in order to obtain a smaller representative portion for the determination of the factors mentioned.

Experiments have shown that the sample upon which the determinations for color, damage, foreign material, etc., are based should

[1] The work covered by this bulletin was done under the direction of Dr. J. W. T. Duvel, in charge of the Office of Grain Standardization of the Bureau of Plant Industry. Since August 18, 1916, the grain-standardization work of the Department of Agriculture has been administered jointly by the Office of Markets and Rural Organization and the Bureau of Plant Industry in connection with the administration of the United States Grain Standards Act.

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be approximately 250 grams in size. After the mechanical separations and weighings have been made, mathematical calculations are involved in order to convert these weights into terms of percentage, and the accompanying table enables the analyst to accomplish these results without any calculations.

DIRECTIONS FOR USING THE TABLE.

Table I shows percentage equivalents ranging from 0 to 40 for samples weighing from 240 to 260 grams, inclusive, which covers the

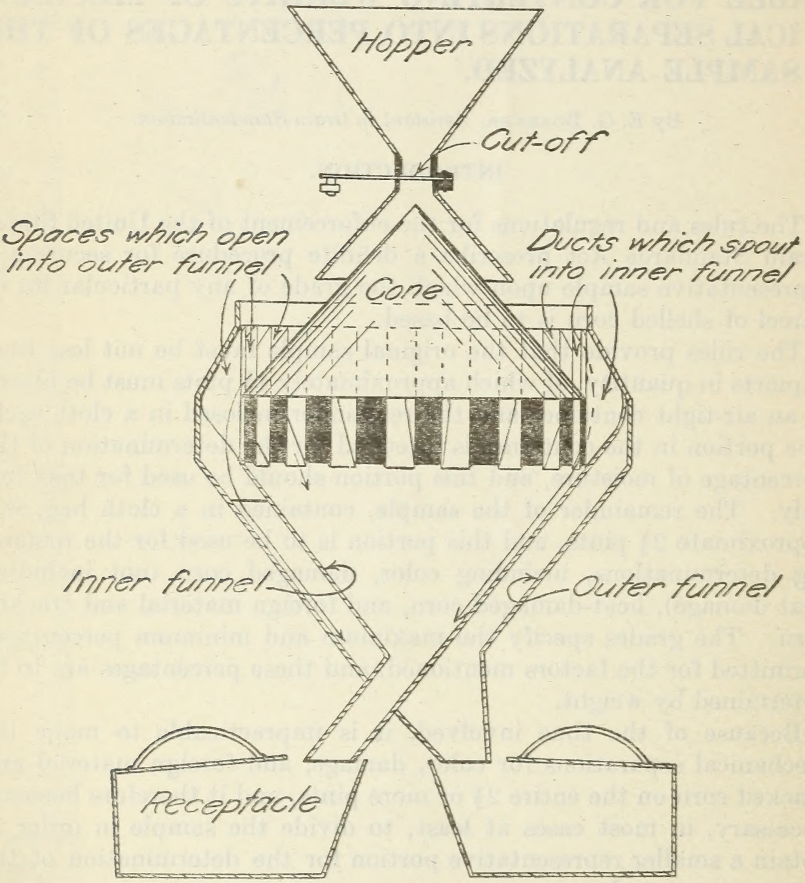

FIG. 1.—A vertical cross section of the sampling device, showing the paths taken by the material in passing from the hopper to the containers.

entire range of corn of other colors, damage, heat damage, and foreign material and cracked corn specified in the numbered Federal Corn Standards.

In using the table to ascertain the percentage equivalent of a certain weight of a separation of damage, etc., always read from left to right.

The solution of the following problem will illustrate the use of the table:

Problem.—A sample weighing 240 grams contains 8 grams of damaged corn. What is the percentage of damaged corn contained in the sample?

Referring to Table I (p. 6), follow down the first column to the figure 8.0 (the weight of the separation of damaged corn in grams). The figure opposite (in the second column, with heading 240) is found to be 3.3, which is the correct percentage expressed to the nearest tenth of 1 per cent.

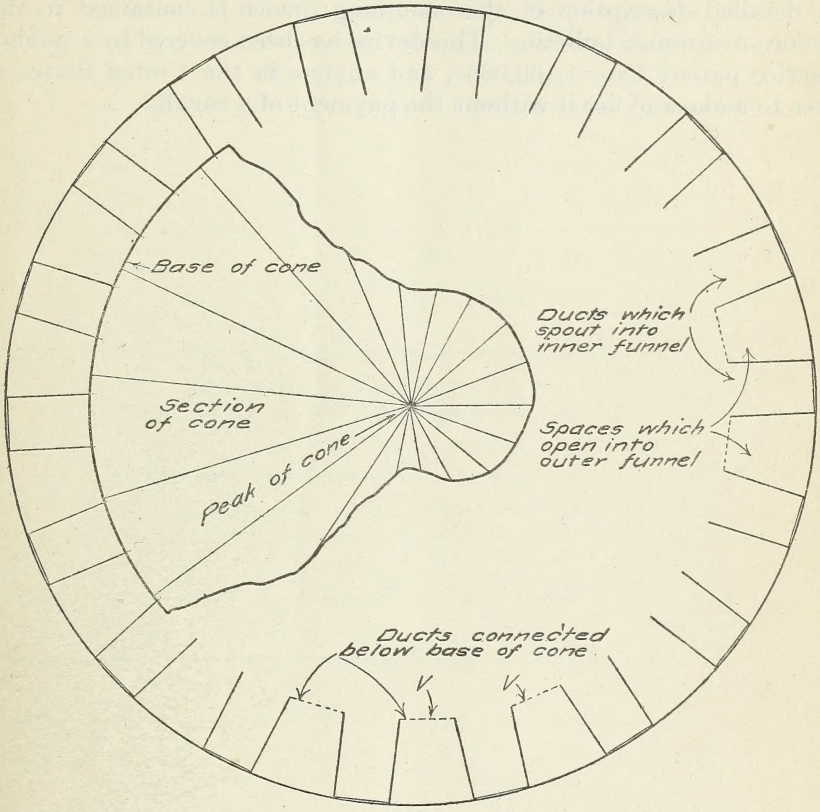
Base of cone
Ducts which spout into inner funnel
Section of cone
Spaces which open into outer funnel
Peak of cone
Ducts connected below base of cone

FIG. 2.—Cross section of the sampling device at the base of the cone.

The use of the table will save time in converting the separations into terms of percentages of the whole sample analyzed, and its careful use will prevent errors which often occur in the mathematical calculations involved when the table is not used.

In this connection it is highly essential that extreme care should be taken to preserve the accuracy of the sample when reducing the original 2½ or more pints taken from the bulk grain to the smaller sample of approximately 250 grams for analytical purposes. Ex-

periments have shown that it is almost impossible to divide a large sample into smaller portions and at the same time retain the correct proportion of damage, dirt, color, etc., in the smaller sample unless a device similar to the one described in Bulletin 287 of the United States Department of Agriculture is used. This apparatus was devised to meet the demands of grain and seed dealers, as well as laboratory workers, for securing a reliable grain or seed sample from a larger portion of the material to be examined, analyzed, and graded. Figure 1 shows a vertical cross section of the sampling device, while figure 2 shows a cross section of this device at the base of the cone. A detailed description of this sampling device is contained in the before-mentioned bulletin. This device has been covered by a public-service patent (No. 1,160,036), and anyone in the United States is free to make and use it without the payment of a royalty.

TABLE I.—*Equivalent percentage of a sample of grain, etc., when the weight of the sample analyzed and the weight of the mechanical separation are given.*

Weight of separation.	Weight of sample analyzed (grams).																				
	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
0.1 gram	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
.2 gram	.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.3 gram	.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.4 gram	.2	.	.	.	.	.	.	.	.	.	.	.1	.	.	.	.	.	.	.	.	.
.5 gram	.2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.6 gram	.2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.7 gram	.3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.8 gram	.3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.9 gram	.4	.	.	.	.	.	.	.	.	.	.	.3	.	.	.	.	.	.	.	.	.
1.0 gram	.4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1.1 grams	.4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1.2 grams	.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1.3 grams	.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1.4 grams	.6	.	.	.	.	.	.	.	.	.	.	.5	.	.	.	.	.	.	.	.	.
1.5 grams	.6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1.6 grams	.7	.	.	.6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1.7 grams	.7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.6	.	.
1.8 grams	.7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1.9 grams	.8	.	.	.	.	.	.	.	.	.	.	.7	.	.	.	.	.	.	.	.	.
2.0 grams	.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2.1 grams	.9	.	.	.	.	.8	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2.2 grams	.9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.8	.	.	.	.
2.3 grams	.9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2.4 grams	1.0	.	.	.	.	.	.	.	.	.	.	.9	.	.	.	.	.	.	.	.	.

2.5 grams	1.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2.6 grams	1.1	.	.	.	.	.	1.0	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2.7 grams	1.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.0	.	.	.	.	.
2.8 grams	1.2	.	1.1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
2.9 grams	1.2	.	.	.	.	.	.	.	.	.	.	1.1	.	.	.	.	.	.	.	.	.
3.0 grams	1.2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.1	.
3.1 grams	1.3	.	.	.	.	.	.	1.2	.	.	.	.	.	.	.	.	.	.	.	.	.
3.2 grams	1.3	.	.	.	.	.	.	.	.	.	.	.	.	.	1.2	.	.	.	.	.	.
3.3 grams	1.4	.	.	1.3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3.4 grams	1.4	.	.	.	.	.	.	.	.	.	.	1.3	.	.	.	.	.	.	.	.	.
3.5 grams	1.4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.3	.	.
3.6 grams	1.5	.	.	.	.	.	.	1.4	.	.	.	.	.	.	.	.	.	.	.	.	.
3.7 grams	1.5	.	.	.	.	.	.	.	.	.	.	.	.	.	1.4	.	.	.	.	.	.
3.8 grams	1.6	.	.	.	1.5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3.9 grams	1.6	.	.	.	.	.	.	.	.	.	.	1.5	.	.	.	.	.	.	.	.	.
4.0 grams	1.7	1.6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.5	.	.	.
4.1 grams	1.7	.	.	.	.	.	.	1.6	.	.	.	.	.	.	.	.	.	.	.	.	.
4.2 grams	1.7	.	.	.	.	.	.	.	.	.	.	.	.	.	1.6	.	.	.	.	.	.
4.3 grams	1.8	.	.	.	.	1.7	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1.6
4.4 grams	1.8	.	.	.	.	.	.	.	.	.	.	1.7	.	.	.	.	.	.	.	.	.
4.5 grams	1.9	.	1.8	.	.	.	.	.	.	.	.	.	.	.	.	.	1.7	.	.	.	.
4.6 grams	1.9	.	.	.	.	.	.	.	1.8	.	.	.	.	.	.	.	.	.	.	.	.
4.7 grams	1.9	.	.	.	.	.	.	.	.	.	.	.	.	1.8	.	.	.	.	.	.	.
4.8 grams	2.0	.	.	.	.	1.9	.	.	.	.	.	.	.	.	.	.	.	.	.	1.8	.
4.9 grams	2.0	.	.	.	.	.	.	.	.	.	.	1.9	.	.	.	.	.	.	.	.	.
5.0 grams	2.1	.	.	2.0	.	.	.	.	.	.	.	.	.	.	.	.	1.9	.	.	.	.

TABLE I.—*Equivalent percentage of a sample of grain, etc., when the weight of the sample analyzed and the weight of the mechanical separation are given*—Continued.

Weight of separation.	Weight of sample analyzed (grams).																				
	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
5.1 grams	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
5.2 grams	2.2	2.1	.	.	.	.	.	.	.	.	.	.	.	2.0	.	.	.	.	.	.	.
5.3 grams	2.2	.	.	.	.	.	2.1	.	.	.	.	.	.	.	.	.	.	.	2.0	.	.
5.4 grams	2.2	.	.	.	.	.	.	.	.	.	.	2.1	.	.	.	.	.	.	.	.	.
5.5 grams	2.3	.	.	.	2.2	.	.	.	.	.	.	.	.	.	.	2.1	.	.	.	.	.
5.6 grams	2.3	.	.	.	.	.	.	.	2.2	.	.	.	.	.	.	.	.	.	.	.	2.1
5.7 grams	2.4	.	2.3	.	.	.	.	.	.	.	.	.	.	2.2	.	.	.	.	.	.	.
5.8 grams	2.4	.	.	.	.	.	2.3	.	.	.	.	.	.	.	.	.	.	2.2	.	.	.
5.9 grams	2.4	.	.	.	.	.	.	.	.	.	.	2.3	.	.	.	.	.	.	.	.	.
6.0 grams	2.5	.	.	.	2.4	.	.	.	.	.	.	.	.	.	.	2.3	.	.	.	.	.
6.1 grams	2.5	.	.	.	.	.	.	.	2.4	.	.	.	.	.	.	.	.	.	.	2.3	.
6.2 grams	2.6	.	.	2.5	.	.	.	.	.	.	.	.	.	2.4	.	.	.	.	.	.	.
6.3 grams	2.6	.	.	.	.	.	.	2.5	.	.	.	.	.	.	.	.	.	2.4	.	.	.
6.4 grams	2.7	2.6	.	.	.	.	.	.	.	.	.	2.5	.	.	.	.	.	.	.	.	.
6.5 grams	2.7	.	.	.	.	2.6	.	.	.	.	.	.	.	.	2.5	.	.	.	.	.	.
6.6 grams	2.7	.	.	.	.	.	.	.	.	2.6	.	.	.	.	.	.	.	.	2.5	.	.
6.7 grams	2.8	.	.	2.7	.	.	.	.	.	.	.	.	2.6	.	.	.	.	.	.	.	.
6.8 grams	2.8	.	.	.	.	.	.	2.7	.	.	.	.	.	.	.	.	2.6	.	.	.	.
6.9 grams	2.9	.	2.8	.	.	.	.	.	.	.	.	2.7	.	.	.	.	.	.	.	.	2.6
7.0 grams	2.9	.	.	.	.	2.8	.	.	.	.	.	.	.	.	2.7	.	.	.	.	.	.
7.1 grams	2.9	.	.	.	.	.	.	.	.	2.8	.	.	.	.	.	.	.	.	2.7	.	.
7.2 grams	3.0	.	.	.	2.9	.	.	.	.	.	.	.	2.8	.	.	.	.	.	.	.	.
7.3 grams	3.0	.	.	.	.	.	.	2.9	.	.	.	.	.	.	.	.	2.8	.	.	.	.
7.4 grams	3.1	.	3.0	.	.	.	.	.	.	.	.	2.9	.	.	.	.	.	.	.	2.8	.

7.5 grams....	3.1	.	.	.	.	.	3.0	.	.	.	.	.	.	.	2.9	.	.	.	.	.	.
7.6 grams....	3.2	3.1	.	.	.	.	.	.	.	3.0	.	.	.	.	.	.	.	2.9	.	.	.
7.7 grams....	3.2	.	.	.	3.1	.	.	.	.	.	.	.	3.0	.	.	.	.	.	.	.	.
7.8 grams....	3.2	.	.	.	.	.	.	3.1	.	.	.	.	.	.	.	3.0	.	.	.	.	.
7.9 grams....	3.3	.	.	3.2	.	.	.	.	.	.	.	3.1	.	.	.	.	.	.	.	3.0	.
8.0 grams....	3.3	.	.	.	.	.	3.2	.	.	.	.	.	.	.	3.1	.	.	.	.	.	.
8.1 grams....	3.4	.	3.3	.	.	.	.	.	.	3.2	.	.	.	.	.	.	.	3.1	.	.	.
8.2 grams....	3.4	.	.	.	.	3.3	.	.	.	.	.	.	3.2	.	.	.	.	.	.	.	3.1
8.3 grams....	3.4	.	.	.	.	.	.	.	3.3	.	.	.	.	.	.	3.2	.	.	.	.	.
8.4 grams....	3.5	.	.	3.4	.	.	.	.	.	.	.	3.3	.	.	.	.	.	.	3.2	.	.
8.5 grams....	3.5	.	.	.	.	.	3.4	.	.	.	.	.	.	3.3	.	.	.	.	.	.	.
8.6 grams....	3.6	.	3.5	.	.	.	.	.	.	3.4	.	.	.	.	.	.	3.3	.	.	.	.
8.7 grams....	3.6	.	.	.	.	3.5	.	.	.	.	.	.	3.4	.	.	.	.	.	.	3.3	.
8.8 grams....	3.7	3.6	.	.	.	.	.	.	3.5	.	.	.	.	.	.	3.4	.	.	.	.	.
8.9 grams....	3.7	.	.	.	3.6	.	.	.	.	.	.	3.5	.	.	.	.	.	.	3.4	.	.
9.0 grams....	3.7	.	.	.	.	.	3.6	.	.	.	.	.	.	3.5	.	.	.	.	.	.	.
9.1 grams....	3.8	.	.	3.7	.	.	.	.	.	3.6	.	.	.	.	.	.	3.5	.	.	.	.
9.2 grams....	3.8	.	.	.	.	3.7	.	.	.	.	.	.	3.6	.	.	.	.	.	.	3.5	.
9.3 grams....	3.9	3.8	.	.	.	.	.	.	3.7	.	.	.	.	.	.	3.6	.	.	.	.	.
9.4 grams....	3.9	.	.	.	3.8	.	.	.	.	.	.	3.7	.	.	.	.	.	3.6	.	.	.
9.5 grams....	3.9	.	.	.	.	.	.	3.8	.	.	.	.	.	3.7	.	.	.	.	.	.	3.6
9.6 grams....	4.0	.	.	3.9	.	.	.	.	.	.	3.8	.	.	.	.	.	3.7	.	.	.	.
9.7 grams....	4.0	.	.	.	.	3.9	.	.	.	.	.	.	3.8	.	.	.	.	.	3.7	.	.
9.8 grams....	4.1	.	4.0	.	.	.	.	.	3.9	.	.	.	.	.	3.8	.	.	.	.	.	.
9.9 grams....	4.1	.	.	.	.	4.0	.	.	.	.	.	3.9	.	.	.	.	.	3.8	.	.	.
10.0 grams....	4.2	4.1	.	.	.	.	.	4.0	.	.	.	.	.	3.9	.	.	.	.	.	.	3.8

TABLE I.—*Equivalent percentage of a sample of grain, etc., when the weight of the sample analyzed and the weight of the mechanical separation are given*—Continued.

Weight of separation.	Weight of sample analyzed (grams).																				
	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
10.1 grams	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.9	3.9	3.9	3.9
10.2 grams	4.2	.	.	.	.	.	4.1	.	.	.	4.1	.	4.0	.	.	.	.	.	3.9	.	.
10.3 grams	4.3	.	4.2	.	.	.	.	.	4.1	.	.	.	.	.	4.0	.	.	.	.	.	.
10.4 grams	4.3	.	.	.	.	4.2	.	.	.	.	.	4.1	.	.	.	.	.	4.0	.	.	.
10.5 grams	4.4	4.3	.	.	.	.	.	4.2	.	.	.	.	.	4.1	.	.	.	.	.	4.0	.
10.6 grams	4.4	.	.	.	4.3	.	.	.	.	4.2	.	.	.	.	.	4.1	.	.	.	.	.
10.7 grams	4.4	.	.	.	.	.	4.3	.	.	.	.	.	4.2	.	.	.	.	.	4.1	.	.
10.8 grams	4.5	.	.	4.4	.	.	.	.	4.3	.	.	.	.	.	4.2	.	.	.	.	.	4.1
10.9 grams	4.5	.	.	.	.	4.4	.	.	.	.	.	4.3	.	.	.	.	4.2	.	.	.	.
11.0 grams	4.6	.	4.5	.	.	.	.	4.4	.	.	.	.	.	4.3	.	.	.	.	.	4.2	.
11.1 grams	4.6	.	.	.	4.5	.	.	.	.	4.4	.	.	.	.	.	4.3	.	.	.	.	.
11.2 grams	4.7	4.6	.	.	.	.	4.5	.	.	.	.	.	4.4	.	.	.	.	4.3	.	.	.
11.3 grams	4.7	.	.	4.6	.	.	.	.	4.5	.	.	.	.	.	4.4	.	.	.	.	.	4.3
11.4 grams	4.7	.	.	.	.	4.6	.	.	.	.	.	4.5	.	.	.	.	4.4	.	.	.	.
11.5 grams	4.8	.	4.7	.	.	.	.	4.6	.	.	.	.	.	4.5	.	.	.	.	4.4	.	.
11.6 grams	4.8	.	.	.	4.7	.	.	.	.	4.6	.	.	.	.	.	4.5	.	.	.	.	.
11.7 grams	4.9	4.8	.	.	.	.	4.7	.	.	.	.	.	4.6	.	.	.	.	4.5	.	.	.
11.8 grams	4.9	.	.	4.8	.	.	.	.	4.7	.	.	.	.	.	4.6	.	.	.	.	4.5	.
11.9 grams	4.9	.	.	.	.	4.8	.	.	.	.	.	4.7	.	.	.	.	4.6	.	.	.	.
12.0 grams	5.0	.	4.9	.	.	.	.	4.8	.	.	.	.	.	4.7	.	.	.	.	4.6	.	.
12.1 grams	5.0	.	.	.	4.9	.	.	.	.	4.8	.	.	.	.	.	4.7	.	.	.	.	4.6
12.2 grams	5.1	.	5.0	.	.	.	4.9	.	.	.	.	.	4.8	.	.	.	.	4.7	.	.	.
12.3 grams	5.1	.	.	.	5.0	.	.	.	4.9	.	.	.	.	.	4.8	.	.	.	.	4.7	.
12.4 grams	5.2	5.1	.	.	.	.	5.0	.	.	.	.	4.9	.	.	.	.	4.8	.	.	.	.

12.5 grams	5.2	. .	5.1	. .	5.1	. .	. .	5.0	. .	. .	5.0	. .	. .	. .	4.9	. .	. .	4.8	. .	. .	. .	. .	. .	. .	. .	4.8
12.6 grams	5.2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
12.7 grams	5.3	. .	. .	. .	. .	. .	5.1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	4.9	. .	. .	. .	. .	. .	. .	. .
12.8 grams	5.3	. .	5.2	. .	. .	. .	. .	. .	5.1	. .	. .	5.0	. .	. .	5.0	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	4.9
12.9 grams	5.4	5.3	. .	. .	5.2	. .	. .	. .	. .	. .	5.1	. .	. .	. .	. .	. .	. .	. .	5.0	. .	. .	. .	. .	. .	. .	. .
13.0 grams	5.4	. .	5.3	. .	. .	5.2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
13.1 grams	5.4	. .	. .	. .	. .	. .	. .	5.2	. .	. .	5.2	. .	. .	5.1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	5.0
13.2 grams	5.5	. .	5.4	. .	. .	5.3	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
13.3 grams	5.5	. .	. .	. .	5.4	. .	. .	. .	5.3	. .	5.3	. .	. .	. .	5.2	. .	. .	5.1	. .	. .	. .	. .	. .	. .	. .	. .
13.4 grams	5.6	. .	5.5	. .	. .	5.4	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	5.1
13.5 grams	5.6	. .	. .	. .	. .	. .	. .	5.4	. .	. .	5.4	. .	. .	. .	. .	. .	. .	. .	5.2	. .	. .	. .	. .	. .	. .	. .
13.6 grams	5.7	5.6	. .	. .	5.5	. .	. .	. .	. .	. .	. .	. .	. .	5.3	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	5.2
13.7 grams	5.7	. .	. .	5.6	. .	. .	5.5	. .	. .	. .	5.4	. .	. .	. .	5.4	. .	. .	. .	. .	5.3	. .	. .	. .	. .	. .	. .	. .
13.8 grams	5.7	. .	5.6	. .	. .	. .	. .	5.5	. .	. .	. .	5.5	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
13.9 grams	5.8	. .	. .	. .	. .	5.6	. .	. .	5.6	. .	5.5	. .	. .	. .	5.4	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	5.3
14.0 grams	5.8	. .	5.7	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
14.1 grams	5.9	5.8	. .	. .	5.7	. .	. .	. .	. .	. .	5.6	. .	. .	. .	5.5	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
14.2 grams	5.9	. .	5.8	. .	. .	5.7	. .	. .	. .	. .	5.6	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	5.4
14.3 grams	5.9	. .	. .	. .	5.8	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
14.4 grams	6.0	. .	5.9	. .	. .	5.8	. .	. .	. .	. .	5.7	. .	. .	. .	5.6	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	5.5
14.5 grams	6.0	. .	. .	5.9	. .	. .	. .	5.8	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	5.6	. .	. .	. .	. .	. .	. .	. .
14.6 grams	6.1	6.0	. .	5.9	. .	. .	5.9	. .	. .	. .	5.8	. .	. .	5.7	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	5.6
14.7 grams	6.1	. .	. .	6.0	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
14.8 grams	6.2	6.1	. .	. .	6.0	. .	. .	. .	5.9	. .	. .	5.8	. .	. .	. .	. .	. .	. .	5.7	. .	. .	. .	. .	. .	. .	5.6
14.9 grams	6.2	. .	6.1	. .	. .	6.0	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
15.0 grams	6.2	. .	. .	6.1	. .	. .	. .	6.0	. .	. .	. .	5.9	. .	. .	5.8	. .	. .	. .	. .	5.7	. .	. .	. .	. .	. .	. .

TABLE I.—*Equivalent percentage of a sample of grain, etc., when the weight of the sample analyzed and the weight of the mechanical separation are given*—Continued.

Weight of separation.	Weight of sample analyzed (grams).																				
	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
15.1 grams	6.3	6.3	6.2	6.2	6.2	6.2	6.1	6.1	6.1	6.1	6.0	6.0	6.0	6.0	5.9	5.9	5.9	5.9	5.8	5.8	5.8
15.2 grams	6.3	.	.	6.2	.	.	.	6.1	.	.	.	6.0	.	.	.	.	5.9	.	.	.	5.8
15.3 grams	6.4	6.3	.	.	.	6.2	.	.	.	6.1	.	.	.	6.0	.	.	.	5.9	.	.	.
15.4 grams	6.4	.	.	6.3	.	.	.	6.2	.	.	.	6.1	.	.	.	6.0	.	.	.	5.9	.
15.5 grams	6.4	.	.	.	6.3	.	.	.	6.2	.	.	.	6.1	.	.	.	6.0	.	.	.	.
15.6 grams	6.5	.	6.4	.	.	.	6.3	.	.	.	6.2	.	.	.	6.1	.	.	.	6.0	.	.
15.7 grams	6.5	.	.	.	6.4	.	.	6.3	.	.	.	6.2	.	.	.	6.1	.	.	.	.	6.0
15.8 grams	6.6	6.5	.	.	.	6.4	.	.	.	6.3	.	.	.	6.2	.	.	.	6.1	.	.	.
15.9 grams	6.6	.	.	6.5	.	.	.	6.4	.	.	.	6.3	.	.	6.2	.	.	.	.	6.1	.
16.0 grams	6.7	6.6	.	.	6.5	.	.	.	6.4	.	.	.	6.3	.	.	.	6.2	.	.	.	6.1
16.1 grams	6.7	.	6.6	.	.	.	6.5	.	.	.	6.4	.	.	.	6.3	.	.	.	6.2	.	.
16.2 grams	6.7	.	.	.	6.6	.	.	6.5	.	.	.	6.4	.	.	.	6.3	.	.	.	6.2	.
16.3 grams	6.8	.	6.7	.	.	6.6	.	.	.	6.5	.	.	.	6.4	.	.	.	6.3	.	.	.
16.4 grams	6.8	.	.	6.7	.	.	.	6.6	.	.	.	6.5	.	.	6.4	.	.	.	6.3	.	.
16.5 grams	6.9	6.8	.	.	.	6.7	.	.	6.6	.	.	.	6.5	.	.	.	6.4	.	.	.	6.3
16.6 grams	6.9	.	6.8	.	.	.	6.7	.	.	.	6.6	.	.	.	6.5	.	.	6.4	.	.	.
16.7 grams	6.9	.	.	.	6.8	.	.	.	6.7	.	.	6.6	.	.	.	6.5	.	.	.	6.4	.
16.8 grams	7.0	.	6.9	.	.	6.8	.	.	.	6.7	.	.	.	6.6	.	.	.	6.5	.	.	.
16.9 grams	7.0	.	.	6.9	.	.	.	6.8	.	.	.	6.7	.	.	6.6	.	.	.	6.5	.	.
17.0 grams	7.1	7.0	.	.	.	6.9	.	.	6.8	.	.	.	6.7	.	.	.	6.6	.	.	.	6.5
17.1 grams	7.1	.	.	7.0	.	.	6.9	.	.	.	6.8	.	.	6.7	.	.	.	6.6	.	.	.
17.2 grams	7.2	7.1	.	.	7.0	.	.	.	6.9	.	.	6.8	.	.	.	6.7	.	.	.	6.6	.
17.3 grams	7.2	.	7.1	.	.	.	7.0	.	.	6.9	.	.	.	6.8	.	.	6.7	.	.	.	6.6
17.4 grams	7.2	.	.	.	7.1	.	.	7.0	.	.	.	6.9	.	.	6.8	.	.	.	6.7	.	.

17.5 grams	7.3	.	7.2	.	.	7.1	.	7.0	.	7.0	.	6.9	.	.	.	6.8	.	6.7	.
17.6 grams	7.3	.	.	.	.	.	7.1	.	.	.	.	.	6.9	.	.	.	6.8	.	.
17.7 grams	7.4	7.3	.	7.2	.	.	.	7.1	.	.	7.0	.	.	.	6.9	.	.	6.8	6.8
17.8 grams	7.4	.	7.3	.	.	7.2	.	.	7.1	.	.	7.0	.	.	.	6.9	.	.	.
17.9 grams	7.4	.	.	7.3	.	.	7.2	.	.	.	7.1	.	7.1	.	7.0	.	.	6.9	.
18.0 grams	7.5	.	7.4	.	7.3	.	.	7.2	.	.	.	7.1	.	7.0	.	7.0	.	.	6.9
18.1 grams	7.5	.	.	7.4	.	7.3	.	.	.	7.2	.	.	7.1	.	.	.	7.0	.	.
18.2 grams	7.6	7.5	7.4	.	.	.	7.3	.	.	.	7.2	.	.	7.1	.	.	.	7.0	.
18.3 grams	7.6	.	.	7.5	.	7.4	.	.	7.3	.	.	7.2	.	.	7.1	.	.	.	7.0
18.4 grams	7.7	7.6	7.5	.	.	.	7.4	.	.	.	7.3	.	7.2	.	.	7.1	.	.	.
18.5 grams	7.7	.	.	7.6	7.5	.	.	7.4	.	.	.	7.3	.	7.2	.	.	.	7.1	.
18.6 grams	7.7	7.6	7.6	.	.	7.5	.	.	7.4	.	.	.	7.3	.	.	7.2	.	.	7.1
18.7 grams	7.8	.	.	7.7	7.6	.	.	7.5	.	7.4	.	.	.	7.3	.	.	.	7.2	.
18.8 grams	7.8	7.7	7.7	.	.	7.6	.	.	7.5	.	.	7.4	.	.	7.3	.	.	.	7.2
18.9 grams	7.9	7.8	.	7.7	7.7	.	7.6	.	.	7.5	.	.	7.4	.	.	7.3	.	.	7.3
19.0 grams	7.9	.	7.8	.	.	7.7	.	.	7.6	.	.	7.5	.	.	7.4	.	.	.	.
19.1 grams	7.9	.	.	7.8	7.8	.	7.7	7.7	.	7.6	.	.	7.5	.	.	7.4	.	.	7.3
19.2 grams	8.0	.	7.9	.	.	7.8	.	.	7.7	.	7.6	.	.	7.5	.	.	.	7.4	.
19.3 grams	8.0	.	.	7.9	.	.	7.8	.	.	7.7	.	7.6	.	.	7.6	.	7.5	.	.
19.4 grams	8.1	8.0	.	.	7.9	.	.	7.8	.	.	7.7	.	7.6	.	.	7.5	.	.	7.4
19.5 grams	8.1	.	8.0	.	.	7.9	.	.	7.8	.	.	7.7	.	7.6	.	.	7.5	.	.
19.6 grams	8.2	8.1	.	8.0	.	.	7.9	.	.	7.8	.	.	7.7	.	7.6	.	.	.	7.5
19.7 grams	8.2	.	8.1	.	8.0	.	.	7.9	.	.	7.8	.	.	7.7	.	.	7.6	.	.
19.8 grams	8.2	.	.	8.1	.	8.0	.	.	7.9	.	.	7.8	.	.	7.7	.	.	7.6	.
19.9 grams	8.3	8.2	.	.	8.1	.	8.0	.	.	7.9	.	.	7.8	.	.	7.7	.	.	7.6
20.0 grams	8.3	.	8.2	.	.	8.1	.	.	8.0	.	.	7.9	.	.	7.8	.	.	7.7	.

TABLE I.—*Equivalent percentage of a sample of grain, etc., when the weight of the sample analyzed and the weight of the mechanical separation are given*—Continued.

Weight of separation.	Weight of sample analyzed (grams).																				
	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
20.1 grams	8.4	8.3	8.3	8.3	8.2	8.2	8.2	8.1	8.1	8.1	8.0	8.0	8.0	7.9	7.9	7.9	7.8	7.8	7.8	7.8	7.7
20.2 grams	8.4	.	8.3	.	.	8.2	.	.	8.1	.	.	8.0	.	.	7.9	.	.	7.8	.	.	.
20.3 grams	8.4	.	.	8.3	.	.	8.2	.	.	8.1	.	.	8.0	.	.	.	7.9	.	.	7.8	.
20.4 grams	8.5	.	8.4	.	.	8.3	.	8.2	.	.	.	8.1	.	.	8.0	.	.	7.9	.	.	7.8
20.5 grams	8.5	.	.	8.4	.	.	8.3	.	.	8.2	.	.	8.1	.	.	8.0	.	.	7.9	.	.
20.6 grams	8.6	8.5	.	.	8.4	.	.	8.3	.	.	8.2	.	.	8.1	.	.	8.0	.	.	7.9	.
20.7 grams	8.6	.	8.5	.	.	8.4	.	.	8.3	.	.	8.2	.	.	8.1	.	.	8.0	.	.	.
20.8 grams	8.7	8.6	.	8.5	.	.	8.4	.	.	8.3	.	.	8.2	.	.	8.1	.	.	8.0	.	.
20.9 grams	8.7	.	8.6	.	.	8.5	.	.	8.4	.	.	8.3	.	.	8.2	.	.	8.1	.	.	8.0
21.0 grams	8.7	.	.	8.6	.	.	8.5	.	.	8.4	.	.	8.3	.	.	8.2	.	.	8.1	.	.
21.1 grams	8.8	8.7	.	.	8.6	.	.	8.5	.	.	8.4	.	.	8.3	.	.	8.2	.	.	8.1	.
21.2 grams	8.8	.	.	8.7	.	8.6	.	.	8.5	.	.	8.4	.	.	8.3	.	.	8.2	.	.	8.1
21.3 grams	8.9	8.8	.	.	8.7	.	8.6	.	.	8.5	.	.	8.4	.	.	8.3	.	.	8.2	.	.
21.4 grams	8.9	.	8.8	.	.	8.7	.	.	8.6	.	.	8.5	.	8.4	.	.	8.3	.	.	.	8.2
21.5 grams	8.9	.	.	8.8	.	.	8.7	.	.	8.6	.	.	8.5	.	.	8.4	.	.	8.3	.	.
21.6 grams	9.0	.	8.9	.	8.8	.	.	8.7	.	.	8.6	.	.	8.5	.	.	8.4	.	.	8.3	.
21.7 grams	9.0	.	.	8.9	.	.	8.8	.	8.7	.	.	8.6	.	.	8.5	.	.	8.4	.	.	8.3
21.8 grams	9.1	9.0	.	.	8.9	.	.	8.8	.	8.7	.	.	8.6	.	.	8.5	.	.	8.4	.	.
21.9 grams	9.1	.	9.0	.	.	8.9	.	.	8.8	.	.	8.7	.	8.6	.	.	8.5	.	.	8.4	.
22.0 grams	9.2	9.1	.	9.0	.	.	8.9	.	.	8.8	.	.	8.7	.	.	8.6	.	.	8.5	.	.
22.1 grams	9.2	.	9.1	.	9.0	.	.	8.9	.	.	8.8	.	.	8.7	.	.	8.6	.	.	8.5	.
22.2 grams	9.2	.	.	9.1	.	.	9.0	.	8.9	.	.	8.8	.	.	8.7	.	.	8.6	.	.	8.5
22.3 grams	9.3	9.2	.	.	9.1	.	.	9.0	.	8.9	.	.	8.8	.	.	8.7	.	.	8.6	.	.
22.4 grams	9.3	.	9.2	.	.	9.1	.	.	9.0	.	.	8.9	.	8.8	.	.	8.7	.	.	8.6	.

22.5 grams	9.4	9.3	9.2	.	9.2	9.1	.	9.0	9.0	.	8.9	.	8.8	.	8.7	8.7	.	8.6							
22.6 grams	9.4	.	.	9.3	.	.	.	.	.	.	.	8.9	.	8.8	.	.	8.7	.							
22.7 grams	9.4	.	9.3	.	.	9.2	9.1	.	.	9.0	.	.	8.9	.	8.8	.	.	8.7							
22.8 grams	9.5	.	9.4	.	9.3	.	.	9.1	.	.	9.0	.	.	8.9	.	8.8	.	.							
22.9 grams	9.5	9.5	.	9.4	.	9.3	9.2	.	9.1	.	.	9.0	.	.	8.9	.	8.8	.							
23.0 grams	9.6	.	.	.	9.4	.	.	9.2	.	.	9.1	.	9.0	.	.	8.9	.	8.8							
23.1 grams	9.6	9.6	9.5	.	.	9.4	9.3	.	9.2	.	.	9.1	.	9.0	.	.	8.9	.							
23.2 grams	9.7	.	.	9.5	.	.	9.4	9.3	.	9.2	.	.	9.1	.	9.0	.	.	8.9							
23.3 grams	9.7	.	9.6	.	9.5	.	.	9.4	9.3	.	9.2	.	.	9.1	.	9.0	.	.							
23.4 grams	9.7	.	.	9.6	.	9.5	.	.	9.4	9.3	.	9.2	.	.	9.1	.	9.0	.							
23.5 grams	9.8	9.7	9.7	.	9.6	.	9.5	.	.	9.4	9.3	.	9.2	.	.	9.1	.	9.0							
23.6 grams	9.8	.	.	.	.	9.6	.	9.5	.	.	9.4	9.3	.	9.2	.	.	9.1	.							
23.7 grams	9.9	9.8	9.8	9.7	.	.	9.6	.	9.5	.	.	9.4	.	.	9.2	.	.	9.1							
23.8 grams	9.9	.	.	.	9.7	.	.	9.6	.	9.5	.	.	9.3	.	.	9.2	.	.							
23.9 grams	9.9	9.9	9.8	9.8	.	9.7	.	.	9.6	.	9.5	.	.	9.4	.	.	9.3	.							
24.0 grams	10.0	.	.	.	9.8	.	9.7	.	.	9.6	.	9.5	.	.	9.4	.	.	9.3							
24.1 grams	10.0	10.0	9.9	.	.	9.8	.	9.7	.	.	9.6	.	9.5	.	.	9.4	.	.							
24.2 grams	10.1	.	.	9.9	.	.	9.8	.	9.7	.	.	9.6	.	9.5	.	.	9.4	.							
24.3 grams	10.1	10.1	10.0	.	9.9	.	.	9.8	.	9.7	.	.	9.6	.	9.5	.	.	9.4							
24.4 grams	10.2	.	.	10.0	.	9.9	.	.	9.8	.	9.7	.	.	9.6	.	9.5	.	.							
24.5 grams	10.2	10.2	10.1	.	10.0	.	9.9	.	.	9.8	.	9.7	.	.	9.6	.	9.5	.							
24.6 grams	10.2	.	10.1	10.1	.	10.0	.	9.9	.	.	9.8	.	9.7	.	.	9.6	.	9.5							
24.7 grams	10.3	10.2	.	.	10.1	.	10.0	.	9.9	.	.	9.8	.	9.7	.	.	9.6	.							
24.8 grams	10.3	.	10.2	.	.	10.1	.	10.0	.	9.9	.	.	9.8	.	9.7	.	.	9.6							
24.9 grams	10.4	10.3	.	10.2	.	.	10.1	.	10.0	.	9.9	.	.	9.8	.	9.7	.	.							
25.0 grams	10.4	.	10.3	.	10.2	.	.	10.1	.	10.0	.	9.9	.	.	9.8	.	9.7	.							

TABLE I.—*Equivalent percentage of a sample of grain, etc., when the weight of the sample analyzed and the weight of the mechanical separation are given*—Continued.

Weight of separation.	Weight of sample analyzed (grams).																				
	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
25.1 grams	10.4	10.4	10.4	10.3	10.3	10.2	10.2	10.2	10.1	10.1	10.0	10.0	10.0	9.9	9.9	9.8	9.8	9.8	9.7	9.7	9.6
25.2 grams	10.5	10.4	.	.	10.3	.	10.2	.	.	10.1	.	10.0	.	.	9.9	.	9.8	.	.	9.7	.
25.3 grams	10.5	.	10.4	.	.	10.3	.	10.2	.	.	10.1	.	10.0	.	.	9.9	.	9.8	.	.	9.7
25.4 grams	10.6	10.5	.	10.4	.	.	10.3	.	10.2	.	.	10.1	.	10.0	.	.	9.9	.	9.8	.	.
25.5 grams	10.6	.	10.5	.	10.4	.	.	10.3	.	10.2	.	10.1	.	.	10.0	.	.	9.9	.	9.8	.
25.6 grams	10.7	10.6	.	10.5	.	10.4	.	.	10.3	.	10.2	.	10.1	.	.	10.0	.	.	9.9	.	9.8
25.7 grams	10.7	.	10.6	.	10.5	.	10.4	.	.	10.3	.	10.2	.	10.1	.	.	10.0	.	.	9.9	.
25.8 grams	10.7	.	.	10.6	.	10.5	.	10.4	.	.	10.3	.	10.2	.	10.1	.	.	10.0	.	.	9.9
25.9 grams	10.8	10.7	.	10.6	.	.	10.5	.	10.4	.	.	10.3	.	10.2	.	10.1	.	.	10.0	.	.
26.0 grams	10.8	.	10.7	.	10.6	.	.	10.5	.	10.4	.	10.3	.	.	10.2	.	10.1	.	.	10.0	.
26.1 grams	10.9	10.8	.	10.7	.	10.6	.	.	10.5	.	10.4	.	10.3	.	.	10.2	.	10.1	.	.	10.0
26.2 grams	10.9	.	10.8	.	10.7	.	10.6	.	.	10.5	.	10.4	.	10.3	.	.	10.2	.	10.1	.	.
26.3 grams	10.9	.	.	10.8	.	10.7	.	10.6	.	.	10.5	.	10.4	.	10.3	.	.	10.2	.	10.1	.
26.4 grams	11.0	10.9	.	.	10.8	.	10.7	.	10.6	.	.	10.5	.	10.4	.	10.3	.	.	10.2	.	10.1
26.5 grams	11.0	.	10.9	.	.	10.8	.	10.7	.	10.6	.	10.5	.	.	10.4	.	10.3	.	.	10.2	.
26.6 grams	11.1	11.0	.	10.9	.	10.8	.	.	10.7	.	10.6	.	10.5	.	.	10.4	.	10.3	.	.	10.2
26.7 grams	11.1	.	11.0	.	10.9	.	10.8	.	.	10.7	.	10.6	.	10.5	.	.	10.4	.	10.3	.	.
26.8 grams	11.2	11.1	.	11.0	.	10.9	.	10.8	.	.	10.7	.	10.6	.	10.5	.	.	10.4	.	10.3	.
26.9 grams	11.2	.	11.1	.	11.0	.	10.9	.	10.8	.	.	10.7	.	10.6	.	10.5	.	.	10.4	.	10.3
27.0 grams	11.2	.	11.1	.	.	11.0	.	10.9	.	10.8	.	10.7	.	.	10.6	.	10.5	.	.	10.4	.
27.1 grams	11.3	11.2	.	11.1	.	.	11.0	.	10.9	.	10.8	.	10.7	.	.	10.6	.	10.5	.	.	10.4
27.2 grams	11.3	.	11.2	.	11.1	.	11.0	.	.	10.9	.	10.8	.	10.7	.	.	10.6	.	10.5	.	.
27.3 grams	11.4	11.3	.	11.2	.	11.1	.	11.0	.	.	10.9	.	10.8	.	10.7	.	.	10.6	.	10.5	.
27.4 grams	11.4	.	11.3	.	11.2	.	11.1	.	11.0	.	.	10.9	.	10.8	.	10.7	.	.	10.6	.	10.5

27.5 grams	11.4	.	11.3	.	11.2	.	11.1	.	11.0	.	10.9	.	10.8	10.7	10.6	10.6	.					
27.6 grams	11.5		11.3			11.2		11.1		11.0		10.9					10.7	10.6				
27.7 grams	11.5	11.4		11.3															10.6			
27.8 grams	11.6		11.4		11.3		11.2		11.1		11.0		10.9	10.8	10.7	10.7						
27.9 grams	11.6	11.5		11.4		11.3		11.2		11.1		11.0					10.8	10.7				
28.0 grams	11.7		11.5		11.4		11.3		11.2		11.1		11.0	10.9	10.8	10.8						
28.1 grams	11.7	11.6		11.5		11.4		11.3		11.2		11.1					10.9	10.8				
28.2 grams	11.7		11.6		11.5		11.4		11.3		11.2		11.1	11.0	10.9	10.9						
28.3 grams	11.8	11.7		11.6		11.5		11.4		11.3		11.2					11.0	10.9				
28.4 grams	11.8		11.7		11.6		11.5		11.4		11.3		11.2	11.1	11.0	11.0						
28.5 grams	11.9	11.8		11.7		11.6		11.5		11.4		11.3					11.1	11.0				
28.6 grams	11.9		11.8		11.7		11.6		11.5		11.4		11.3	11.2	11.1	11.1						
28.7 grams	11.9	11.8		11.8		11.7		11.6		11.5		11.4					11.2	11.1				
28.8 grams	12.0		11.9		11.8		11.7		11.6		11.5		11.4	11.3	11.2	11.2						
28.9 grams	12.0	11.9		11.9		11.8		11.7		11.6		11.5					11.3	11.2				
29.0 grams	12.1		12.0		11.9		11.8		11.7		11.6		11.5	11.4	11.3	11.3						
29.1 grams	12.1	12.0		12.0		11.9		11.8		11.7		11.6					11.4	11.3				
29.2 grams	12.2		12.1		12.0		11.9		11.8		11.7		11.6	11.5	11.4	11.4						
29.3 grams	12.2	12.1		12.1		12.0		11.9		11.8		11.7					11.5	11.4				
29.4 grams	12.2		12.1		12.0		11.9		11.8		11.7		11.6	11.5	11.4	11.4						
29.5 grams	12.3	12.2		12.2		12.0		11.9		11.8		11.7					11.6	11.5				
29.6 grams	12.3		12.2		12.1		12.0		11.9		11.8		11.7	11.6	11.5	11.5						
29.7 grams	12.4	12.3		12.3		12.1		12.0		11.9		11.8					11.7	11.6				
29.8 grams	12.4		12.3		12.2		12.1		12.0		11.9		11.8	11.7	11.6	11.6						
29.9 grams	12.4	12.3		12.3		12.2		12.1		12.0		11.9					11.8	11.7				
30.0 grams	12.5		12.4		12.3		12.2		12.1		12.0		11.9	11.8	11.7	11.7						

TABLE I.—*Equivalent percentage of a sample of grain, etc., when the weight of the sample analyzed and the weight of the mechanical separation are given*—Continued.

Weight of separation.	Weight of sample analyzed (grams).																				
	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
30.1 grams	12.5	12.5	12.4	12.4	12.3	12.3	12.2	12.2	12.1	12.1	12.0	12.0	11.9	11.9	11.8	11.8	11.7	11.7	11.7	11.6	11.6
30.2 grams	12.6	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.	12.0	.	11.9	.	11.8	.	11.7	.	.	11.6
30.3 grams	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.	12.0	.	11.9	.	11.8	.	11.7	.	11.6
30.4 grams	12.7	12.6	.	12.5	12.4	.	12.3	.	12.2	.	.	12.1	.	12.0	.	11.9	.	11.8	.	11.7	.
30.5 grams	12.7	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.	12.0	.	.	11.9	.	11.8	.	11.7
30.6 grams	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.	12.0	.	11.9	.	.	11.8	.
30.7 grams	12.8	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.	12.0	.	11.9	.	11.8	.
30.8 grams	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.	12.0	.	11.9	.	11.8
30.9 grams	12.9	12.8	.	12.7	.	12.6	.	12.5	12.4	.	.	12.3	.	12.2	.	12.1	.	12.0	.	11.9	.
31.0 grams	12.9	.	12.8	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.	.	12.0	.	11.9
31.1 grams	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.	12.0	.	.
31.2 grams	13.0	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.	12.0	.
31.3 grams	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.	12.0
31.4 grams	13.1	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1	.
31.5 grams	13.1	.	13.0	.	12.9	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	.	12.1
31.6 grams	13.2	13.1	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.	12.1
31.7 grams	13.2	13.1	.	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2	.
31.8 grams	13.2	.	13.1	.	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.	12.2
31.9 grams	13.3	13.2	.	13.1	.	13.0	.	12.9	.	12.8	.	12.7	12.6	.	12.5	.	.	12.4	.	12.3	.
32.0 grams	13.3	.	13.2	.	13.1	.	13.0	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3	.
32.1 grams	13.4	13.3	.	13.2	13.1	.	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.	12.3
32.2 grams	13.4	.	13.3	13.2	.	13.1	.	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4	.
32.3 grams	13.4	.	13.3	.	13.2	.	13.1	.	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	12.4
32.4 grams	13.5	13.4	.	13.3	.	13.2	.	13.1	.	13.0	.	12.9	12.8	.	12.7	.	12.6	.	12.5	.	.

32.5 grams....	13.5	.	13.4	.	13.3	.	13.2	13.1	.	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	12.5	.	
32.6 grams....	13.6	13.5	.	13.4	.	13.3	13.2	.	13.1	.	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	12.5	
32.7 grams....	13.6	.	13.5	13.4	.	13.3	.	13.2	.	13.1	.	13.0	.	12.9	.	12.8	.	12.7	.	12.6	.	
32.8 grams....	13.7	13.6	13.5	.	13.4	.	13.3	.	13.2	.	13.1	.	13.0	.	12.9	.	12.8	.	12.7	.	12.6	
32.9 grams....	13.7	13.6	.	13.5	.	13.4	.	13.3	.	13.2	.	13.1	13.0	.	12.9	.	12.8	.	12.7	.	12.6	
33.0 grams....	13.7	.	13.6	.	13.5	.	13.4	.	13.3	13.2	.	13.1	.	13.0	.	12.9	.	12.8	.	12.7	.	
33.1 grams....	13.8	13.7	.	13.6	.	13.5	13.4	.	13.3	.	13.2	.	13.1	.	13.0	.	12.9	.	12.8	.	12.7	
33.2 grams....	13.8	.	13.7	.	13.6	13.5	.	13.4	.	13.3	.	13.2	.	13.1	.	13.0	.	12.9	.	12.8	.	
33.3 grams....	13.9	13.8	.	13.7	13.6	.	13.5	.	13.4	.	13.3	.	13.2	.	13.1	13.0	.	12.9	.	12.8	.	
33.4 grams....	13.9	13.8	.	13.7	.	13.6	.	13.5	.	13.4	.	13.3	13.2	.	13.1	.	13.0	.	12.9	.	12.8	
33.5 grams....	13.9	.	13.8	.	13.7	.	13.6	.	13.5	13.4	.	13.3	.	13.2	.	13.1	.	13.0	.	12.9	.	
33.6 grams....	14.0	13.9	.	13.8	.	13.7	13.6	.	13.5	.	13.4	.	13.3	.	13.2	.	13.1	.	13.0	.	12.9	
33.7 grams....	14.0	.	13.9	.	13.8	13.7	.	13.6	.	13.5	.	13.4	.	13.3	.	13.2	.	13.1	.	13.0	.	
33.8 grams....	14.1	14.0	.	13.9	13.8	.	13.7	.	13.6	.	13.5	.	13.4	13.3	.	13.2	.	13.1	.	13.0	.	
33.9 grams....	14.1	.	14.0	13.9	.	13.8	.	13.7	.	13.6	.	13.5	13.4	.	13.3	.	13.2	.	13.1	.	13.0	
34.0 grams....	14.2	14.1	14.0	.	13.9	.	13.8	.	13.7	13.6	.	13.5	.	13.4	.	13.3	.	13.2	.	13.1	.	
34.1 grams....	14.2	14.1	.	14.0	.	13.9	.	13.8	13.7	.	13.6	.	13.5	.	13.4	.	13.3	.	13.2	.	13.1	
34.2 grams....	14.2	.	14.1	.	14.0	13.9	.	13.8	.	13.7	.	13.6	.	13.5	.	13.4	.	.	13.2	.	13.1	
34.3 grams....	14.3	14.2	.	14.1	14.0	.	13.9	.	13.8	.	13.7	.	13.6	13.5	.	13.4	.	13.3	.	13.2	.	
34.4 grams....	14.3	.	14.2	14.1	.	14.0	.	13.9	.	13.8	.	13.7	13.6	.	13.5	.	13.4	.	13.3	.	13.2	
34.5 grams....	14.4	14.3	14.2	.	14.1	.	14.0	.	13.9	13.8	.	13.7	.	13.6	.	13.5	.	13.4	.	13.3	.	
34.6 grams....	14.4	14.3	.	14.2	.	14.1	.	14.0	13.9	.	13.8	.	13.7	.	13.6	.	13.5	.	13.4	13.3	.	
34.7 grams....	14.4	.	14.3	.	14.2	.	14.1	14.0	.	13.9	.	13.8	.	13.7	.	13.6	13.5	.	13.4	.	13.3	
34.8 grams....	14.5	14.4	.	14.3	.	14.2	14.1	.	14.0	.	13.9	.	13.8	13.7	.	13.6	.	13.5	.	13.4	.	
34.9 grams....	14.5	.	14.4	.	14.3	14.2	.	14.1	.	14.0	.	13.9	13.8	.	13.7	.	13.6	.	13.5	.	13.4	
35.0 grams....	14.6	14.5	.	14.4	14.3	.	14.2	.	14.1	14.0	.	13.9	.	13.8	.	13.7	.	13.6	.	13.5	.	

TABLE 1.—*Equivalent percentage of a sample of grain, etc., when the weight of the sample analyzed and the weight of the mechanical separation are given*—Continued.

Weight of separation.	Weight of sample analyzed (grams).																				
	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
35.1 grams....	14.6	14.6	14.5	14.4	14.4	14.3	14.3	14.2	14.1	14.1	14.0	14.0	13.9	13.9	13.8	13.8	13.7	13.6	13.6	13.5	13.5
35.2 grams....	14.7	14.6	14.5	.	14.4	.	14.3	14.2	.	14.1	.	14.0	13.9	.	13.8	.	13.7	.	13.6	.	13.5
35.3 grams....	14.7	14.6	.	14.5	.	14.4	14.3	.	14.2	.	14.1	.	14.0	13.9	.	13.8	.	13.7	.	13.6	.
35.4 grams....	14.7	.	14.6	.	14.5	14.4	.	14.3	.	14.2	.	14.1	14.0	.	13.9	.	13.8	.	13.7	.	13.6
35.5 grams....	14.8	14.7	.	14.6	14.5	.	14.4	.	14.3	14.2	.	14.1	.	14.0	.	13.9	.	13.8	13.7	.	13.6
35.6 grams....	14.8	.	14.7	14.6	.	14.5	.	14.4	14.3	.	14.2	.	14.1	.	14.0	.	13.9	13.8	.	13.7	.
35.7 grams....	14.9	14.8	14.7	.	14.6	.	14.5	14.4	.	14.3	.	14.2	.	14.1	14.0	.	13.9	.	13.8	.	13.7
35.8 grams....	14.9	14.8	.	14.7	.	14.6	14.5	.	14.4	.	14.3	.	14.2	14.1	.	14.0	.	13.9	.	13.8	.
35.9 grams....	14.9	.	14.8	.	14.7	14.6	.	14.5	.	14.4	.	14.3	14.2	.	14.1	.	14.0	.	13.9	.	13.8
36.0 grams....	15.0	14.9	.	14.8	14.7	.	14.6	.	14.5	14.4	.	14.3	.	14.2	14.1	14.1	.	14.0	13.9	.	13.8
36.1 grams....	15.0	.	14.9	14.8	.	14.7	.	14.6	14.5	.	14.4	.	14.3	.	14.2	14.1	.	14.0	.	13.9	.
36.2 grams....	15.1	15.0	14.9	.	14.8	.	14.7	14.6	.	14.5	.	14.4	.	14.3	14.2	.	14.1	.	14.0	.	13.9
36.3 grams....	15.1	.	15.0	14.9	.	14.8	14.7	.	14.6	.	14.5	.	14.4	14.3	.	14.2	.	14.1	.	14.0	.
36.4 grams....	15.2	15.1	15.0	.	14.9	14.8	.	14.7	.	14.6	.	14.5	14.4	.	14.3	.	14.2	.	14.1	14.0	.
36.5 grams....	15.2	15.1	.	15.0	14.9	.	14.8	.	14.7	14.6	.	14.5	.	14.4	.	14.3	14.2	.	14.1	.	14.0
36.6 grams....	15.2	.	15.1	.	15.0	14.9	.	14.8	14.7	.	14.6	.	14.5	.	14.4	14.3	.	14.2	.	14.1	.
36.7 grams....	15.3	15.2	.	15.1	15.0	.	14.9	14.8	.	14.7	.	14.6	.	14.5	14.4	.	14.3	.	14.2	.	14.1
36.8 grams....	15.3	.	15.2	15.1	.	15.0	14.9	.	14.8	.	14.7	.	14.6	14.5	.	14.4	.	14.3	.	14.2	14.1
36.9 grams....	15.4	15.3	15.2	.	15.1	.	15.0	14.9	.	14.8	.	14.7	14.6	.	14.5	.	14.4	14.3	.	14.2	.
37.0 grams....	15.4	15.3	.	15.2	.	15.1	15.0	.	14.9	14.8	.	14.7	.	14.6	.	14.5	14.4	.	14.3	.	14.2
37.1 grams....	15.4	.	15.3	.	15.2	15.1	.	15.0	14.9	.	14.8	.	14.7	.	14.6	14.5	.	14.4	.	14.3	.
37.2 grams....	15.5	15.4	.	15.3	15.2	.	15.1	.	15.0	14.9	.	14.8	.	14.7	14.6	.	14.5	.	14.4	.	14.3
37.3 grams....	15.5	.	15.4	15.3	.	15.2	.	15.1	15.0	.	14.9	.	14.8	14.7	.	14.6	.	14.5	14.4	.	14.3
37.4 grams....	15.6	15.5	15.4	.	15.3	.	15.2	15.1	.	15.0	.	14.9	14.8	.	14.7	.	14.6	14.5	.	14.4	.

37.5 grams....	15.6	.	15.5	15.4	.	15.3	15.2	.	15.1	.	15.0	14.9	.	14.8	.	14.7	14.6	.	14.5	.	14.4
37.6 grams....	15.7	15.6	15.5	.	15.4	15.3	.	15.2	.	15.1	15.0	.	14.9	.	14.8	14.7	.	14.6	.	14.5	.
37.7 grams....	15.7	15.6	.	15.5	15.4	.	15.3	.	15.2	15.1	.	15.0	.	14.9	14.8	.	14.7	.	14.6	14.5	.
37.8 grams....	15.7	.	15.6	15.5	.	15.4	15.3	.	15.2	.	15.1	15.0	.	14.9	.	14.8	.	14.7	14.6	.	14.5
37.9 grams....	15.8	15.7	.	15.6	15.5	.	15.4	15.3	.	15.2	.	15.1	15.0	.	14.9	.	14.8	14.7	.	14.6	.
38.0 grams....	15.8	.	15.7	15.6	.	15.5	15.4	.	15.3	.	15.2	15.1	.	15.0	.	14.9	14.8	.	14.7	.	14.6
38.1 grams....	15.9	15.8	15.7	.	15.6	15.5	.	15.4	15.3	15.3	15.2	.	15.1	15.0	.	14.9	.	14.8	.	14.7	14.6
38.2 grams....	15.9	15.8	.	15.7	15.6	.	15.5	.	15.4	15.3	.	15.2	15.1	.	15.0	.	14.9	.	14.8	14.7	.
38.3 grams....	15.9	.	15.8	.	15.7	15.6	.	15.5	15.4	.	15.3	15.2	.	15.1	.	15.0	.	14.9	14.8	.	14.7
38.4 grams....	16.0	15.9	.	15.8	15.7	.	15.6	15.5	.	15.4	.	15.3	15.2	.	15.1	15.0	.	14.9	.	14.8	.
38.5 grams....	16.0	.	15.9	15.8	.	15.7	15.6	.	15.5	.	15.4	15.3	.	15.2	15.1	.	15.0	.	14.9	.	14.8
38.6 grams....	16.1	16.0	15.9	.	15.8	15.7	.	15.6	.	15.5	15.4	.	15.3	15.2	.	15.1	.	.	15.0	14.9	14.8
38.7 grams....	16.1	16.0	.	15.9	.	15.8	15.7	.	15.6	15.5	.	15.4	15.3	.	15.2	.	15.1	15.0	.	14.9	.
38.8 grams....	16.2	16.1	16.0	.	15.9	15.8	.	15.7	15.6	.	15.5	15.4	.	15.3	.	15.2	15.1	.	15.0	.	14.9
38.9 grams....	16.2	16.1	.	16.0	15.9	.	15.8	15.7	.	15.6	.	15.5	15.4	.	15.3	15.2	.	15.1	.	15.0	.
39.0 grams....	16.2	.	16.1	16.0	.	15.9	15.8	.	15.7	.	15.6	15.5	.	15.4	15.3	.	15.2	.	15.1	15.0	.
39.1 grams....	16.3	16.2	16.1	.	16.0	15.9	.	15.8	.	15.7	15.6	.	15.5	15.4	.	15.3	.	15.2	15.1	.	15.0
39.2 grams....	16.3	.	16.2	16.1	.	16.0	15.9	.	15.8	15.7	.	15.6	15.5	.	15.4	.	15.3	15.2	.	15.1	.
39.3 grams....	16.4	16.3	16.2	.	16.1	16.0	.	15.9	15.8	.	15.7	15.6	.	15.5	.	15.4	15.3	.	15.2	.	15.1
39.4 grams....	16.4	16.3	.	16.2	16.1	.	16.0	15.9	.	15.8	.	15.7	15.6	.	15.5	15.4	.	15.3	.	15.2	15.1
39.5 grams....	16.4	.	16.3	16.2	.	16.1	16.0	.	15.9	.	15.8	15.7	.	15.6	15.5	.	15.4	.	15.3	15.2	.
39.6 grams....	16.5	16.4	.	16.3	16.2	.	16.1	16.0	.	15.9	15.8	.	15.7	15.6	.	15.5	.	15.4	15.3	.	15.2
39.7 grams....	16.5	.	16.4	16.3	.	16.2	16.1	.	16.0	15.9	.	15.8	15.7	.	15.6	.	15.5	15.4	.	15.3	.
39.8 grams....	16.6	16.5	16.4	.	16.3	16.2	.	16.1	16.0	.	15.9	15.8	.	15.7	.	15.6	15.5	.	15.4	.	15.3
39.9 grams....	16.6	16.5	.	16.4	16.3	.	16.2	16.1	.	16.0	.	15.9	15.8	.	15.7	15.6	.	15.5	.	15.4	15.3
40.0 grams....	16.7	16.6	16.5	.	16.4	16.3	.	16.2	16.1	.	16.0	15.9	.	15.8	15.7	.	15.6	.	15.5	15.4	.

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